

App. No. 10/709,889
Amendment dated November 23, 2005
Reply to Office action of August 23, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

Claim 1 (original): A holder for use in semiconductor or liquid-crystal manufacturing devices, comprising:

- a ceramic susceptor; and
- a composite of a ceramic and a metal furnished atop said ceramic susceptor.

Claim 2 (original): A holder as set forth in claim 1, wherein the Young's modulus of the ceramic-and-metal composite is 300 GPa or less.

Claim 3 (original): A holder as set forth in claim 1, wherein the thermal conductivity of the ceramic-and-metal composite is 100 W/mK or more.

Claim 4 (original): A holder as set forth in claim 1, wherein the thermal expansion coefficient of the ceramic-and-metal composite is Claim 2.5×10^{-6} to Claim $8.0 \times 10^{-6}/^{\circ}\text{C}$.

Claim 5 (original): A holder as set forth in claim 1, further comprising a support part supporting the ceramic-and-metal composite.

Claim 6 (original): A holder as set forth in claim 1, further comprising a support part supporting the ceramic susceptor.

Claim 7 (original): A holder as set forth in claim 1, further comprising a support part supporting both the ceramic-and-metal composite and the ceramic susceptor.

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Claim 8 (original): A holder as set forth in claim 1, wherein a coating is formed on at least a processed-object-retaining side of the holder.

Claim 9 (original): A holder as set forth in claim 1, wherein the ceramic-and-metal composite functions as an electrode.

Claim 10 (original): A semiconductor or liquid-crystal manufacturing device in which the holder of claim 1 is installed.

Claim 11 (new): A holder for use in semiconductor or liquid crystal manufacturing devices, the holder comprising:

a processing surface configured to hold the semiconductor or liquid crystal manufacturing device;

a ceramic susceptor; and

a ceramic-metal composite deployed between the processing surface and the ceramic susceptor, the ceramic-metal composite including a substantially uniform mixture of ceramic and metal microconstituents.

Claim 12 (new): A holder as set forth in claim 11, wherein the processing surface is a surface of the ceramic-metal composite.

Claim 13 (new): A holder as set forth in claim 11, wherein the ceramic susceptor comprises a resistive element deployed in or on a surface of a ceramic substrate.

Claim 14 (new): A holder as set forth in claim 11, wherein the ceramic-metal composite comprises a sintered mixture of metal and ceramic powders.

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Claim 15 (new): A holder as set forth in claim 11, wherein the ceramic-metal composite comprises metal infiltrated into a porous ceramic substrate.

Claim 16 (new): A holder as set forth in claim 11, wherein:
the metal comprises at least one member of the group consisting of Al, Si, and Cu; and
the ceramic comprises at least one member of the group consisting of SiC, Al₂O₃, AlN, WC, and BN.

Claim 17 (new): A holder as set forth in claim 11, wherein the ceramic-metal composite comprises at least one compound selected from the group consisting of Al-SiC, Al-Al₂O₃, Al-AlN, Si-SiC, Si-Al₂O₃, and Si-AlN.